

insects. Segments II to IV of the maggot (Hewitt) would represent the three thoracic segments, or segments VIII to X of ancestral insects; and segments V to XIII of the maggot (Hewitt) would represent the ten primitive abdominal segments, or segments XI to XX of ancestral insects, the anal or thirteenth maggot-segment being almost certainly double and representing the last two primitive body-segments. This interpretation is set forth in detail in *Contr. Th. Knowl. Musc. Flies*, with tentative homologies of the ordinate cephalopharyngeal sclerites.

The fact that thirteen distinct segments can be distinguished in the first-stage maggot of *Phasiopteryx*, of which the cephalopharyngeal skeleton occupies the first four, implies that here segments II and III of Hewitt are not coalesced as in *Musca* and most other types.

INSECTS ON A RECENTLY FELLED TREE.

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On November 14, 1911, we found at Cleveland, near Punta Gorda, Florida, a large pine tree cut down and lying nearly horizontal, supported only by such of its branches as had not been broken or hacked off. The tree was a long leaf pine (*Pinus palustris*) and, as we subsequently learned, it had been felled a week previous to our finding it. We beat the branches and the trunk over our umbrellas, scraped the bark off in places, pounded the piles of cut branches, lifting each free from the pile for the purpose, and obtained many insects, principally Coleoptera, in that way, or as they ran away over the ground on being disturbed by us; others were found in the chips about the stump of the tree. The larger and more brilliant species, *Acanthocinus*, *Monohammus*, *Temnochila*, *Chrysobothris*, etc., were easily seen on the trunk and branches, the smaller species were dislodged by our beating sticks, until, after two hours work, a total of 42 species of Coleoptera and 13 species of insects of other orders had been bottled. Over 300 specimens of Coleoptera alone were taken and as many specimens of the more abundant species were allowed to

escape, it may be possible that a thousand insects were at work on the dead pine the morning we were there.

In conjunction with these facts the further fact must be taken into consideration that for two weeks we had been beating branches, living and dead, of the same species of tree at various places in Florida with the usual mixture of success and failure, sometimes no result, sometimes three or four specimens, never any large number, to appreciate this illustration of the value to the beetle collector of a *recently* felled tree. The practice of cutting down trees of various species, of partly cutting through branches so that they will hang with their withered leaves conveniently for beating, is not new; but it may be worth while to add a list of the insects we caught in two hours on one tree to emphasize the advantage of this method of collecting.

LIST OF SPECIES.

Coleoptera.

- Tachys scitulus*, a single specimen.
Selenophorus iripennis,¹ on the ground.
Scymnus myrmidon,¹ on the pine needles.
Scymnus sp., on the pine needles.
Silvanus bidentatus, plentiful.
Silvanus imbellis, under the bark.
Silvanus sp., a single specimen.
Nausibius repandus,² two specimens.
Cicones lineaticollis,¹ a single specimen.
Lasconotus referendarius, plentiful.
Lasconotus pusillus,¹ a single specimen.
Aulonium ferrugineum, several.
Psammoecus desjardinsi,¹ a single specimen.
Hister attenuatus, plentiful.
Hister parallelus, plentiful.
Hister cylindricus, a single specimen.
Nemosoma cylindricum, several.
Trogosita virescens, very abundant.
Tenebrioides collaris, several.
Dicrepidius ramicornis,¹ a single specimen.
Monocrepidius auritus,¹ a single specimen.
Monocrepidius bellus, several.
Chalcophora virginiensis,¹ a single specimen.
Chrysobothris floricola, abundant on branches.
Chrysobothris dentipes, abundant on branches.

Ernobius granulatus, several.
Catorama sp.,² a single specimen.
Criocephalus nubilus,¹ a single specimen.
Xylotrechus sagittatus, several.
Monohammus titillator, several.
Leptostylus arcuatus,¹ a single specimen.
Acanthocinus obsoletus, several.
Acanthocinus nodosus,¹ a single specimen.
Platydemus flavipes, several.
Hypophlaeus glaber, abundant.
Hypophlaeus thoracicus,¹ a single specimen.
Helops cis cloides,² several.
Hylobius pales, plentiful.
Tanymecus lacæna,¹ a single specimen.
Conotrachelus anaglypticus, a single specimen.
Ips (Tomiscus) avulsus,² several.
Pityophthorus centralis, two.

Orthoptera.

Eurycotis floridana Walker,¹ a single specimen of this roach was found among the chips at base of stump.
Ischnoptera sp. (young),¹ two specimens at base of stump among chips.
Ceratinoptera lutea S. & Z.,¹ one specimen beaten from branch.
Mogoplistes sp.,¹ one of these small crickets was beaten from a branch; immature.
Orocharis gryllodes Pall.,¹ ditto.
Gryllus abbreviatus rubens Scudder,¹ among chips at base of stump.

Other Orders.

Two species of Hemiptera, *Cnemodus macrotus* Say and *Piezostethus sordidus* Reut, identified by Mr. H. G. Barber, two kinds of ants, *Solenopsis geminata* Fab. and *Camponotus fallax var. nearcticus* Emery, identified by Professor Wheeler, a scorpion and a pseudo-scorpion were also obtained.

¹Taken by Mr. Davis only; he worked at the base of the tree, where more of the larger species were found, and at the piles of cut branches, which sheltered some species not found on the tree itself, as well as nearly all the insects other than Coleoptera. The smaller Colydiids and Scolytids were found hidden in the crevices of and between the layers of the bark.

²Identified by Mr. E. A. Schwarz.